

**REMARKS**

Claims 3-13, 25, 26, 30 and 51-62 were pending. Claims 1-3, 14-24, 27-51, 61 and 62 have been cancelled. Claims 51 – 60 have been withdrawn. Claim 25 has been amended. New claims 63-65 have been added. No new matter has been added by virtue of the amendments, support being found throughout the specification and the claims as originally filed.

Any cancellation of the claims was done solely to expedite the prosecution of the application. Applicant reserves the right to pursue the claims as originally filed in this or a separate application(s).

**Claim Rejections Withdrawn**

The rejection under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement has been withdrawn.

The rejection under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement has been withdrawn.

The rejection under 35 U.S.C. §112, second paragraph, as being indefinite has been withdrawn.

**Claim Rejections- 35 U.S.C. §103(a)**

The Examiner has rejected claims 3-13, 25, 26, 30 and 62 under 35 U.S.C. §103(a) as allegedly being unpatentable over Hashida et al. (WO 03/106676) in view of Ray et al. (FASEB Journal, 14: 1041 – 1060, 2000). In particular, the Examiner is of the opinion that

it is obvious to combine the probes (of) Hashida in a combined probe set for mere detection purposes and the instant probe set has open language and is not limited to a probe set consisting of the probes set forth in SEQ ID NOs:6, 7 and 8 and Hashida et al teach the use of probe combinations on chips (i.e. the instant probe set).

The combination of probes and probe sets as set forth by Hashida et al alone for the detection or present as combinations on chips as modified by Ray et al as useful for detection of *Staphylococcus* species is prima facie obvious.

Without acquiescing to any validity of the Examiner's rejection, and solely in the interest of advancing prosecution and allowance of the claims, Applicants have amended the claims. Present claim 25 recites a PNA probe set consisting of SEQ ID NOs 6, 7 and 8.

Nowhere does the Hashida reference teach a probe set consisting of SEQ ID NOs 6, 7 and 8, as claimed.

The present invention has particularly designed a probe set that targets a cohort of species. The probes of the present invention are directed towards a phylogenetically conserved region of rRNA target sequence that varies slightly between *Staphylococcus* species. Applicants teach that a particular probe mixture of SEQ ID NOs: 6, 7 and 8 can be made which detects a cohort of species by one fluorescent label, and a single species with a second fluorescent label.

As described in the specification, DNA probes for analysis of *Staphylococcus aureus* and all *Staphylococcus* species (genus-specific probes) have been previously described, as well as PNA probes for the analysis of *S. aureus*, but **these probes all target sequences that are either species-specific or genus-specific**. (page 2, lines 15 – 20, emphasis added). Further, as stated in the specification, the design of probes targeting **a cohort of species** is particularly problematic and requires a combination of highly specific probe constructs and unique target sequences. (p.2, lines 32 – 34, emphasis added).

The Hashida reference teaches probes sets in which all target sequences that are species-specific. Nowhere does the Hashida reference teach a probe set consisting of SEQ ID NOs 6, 7 and 8, as claimed.

The Ray reference does not cure the defects of the Hashida reference. The Ray et al. reference merely provides background on the PNA and its potential use in medical

and biotechnical applications. None of the cited references, alone or together, teaches or suggests any PNA probe set consisting of SEQ ID NOs 6, 7 and 8, as claimed.

Applicants respectfully request that the rejection be withdrawn.

**CONCLUSION**

In view of the foregoing, entry of the amendments and remarks presented, favorable reconsideration and withdrawal of the rejections, and allowance of this application with the pending claims are respectfully requested. If a telephone conversation with the Applicants' attorney would expedite prosecution of the above-identified application, the Examiner is invited to call the undersigned at (617) 449-6509.

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Respectfully submitted,

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